

FIGURE 1

SP22 1 MASKRALVILAKGAEEMETVIPVDIMRRAGIKVTVAGLAGKDPVQCSRDV 50
DJ-1 1 MASKRALVILAKGAEEMETVIPVDVMRRAGIKVTVAGLAGKDPVQCSRDV 50

Peptide 1

SP22 51 VICPDTSLEEAKTQGPYDVVVLPGGNLGAQNLSESALVKEILKEQENRKG 100
DJ-1 51 VICPDASLED**A**KKEGPYDVVVLPGGNLGAQNLSESAAVKEILKEQENRKG 100

Peptide 2

SP22 101 LIAAICAGPTALLAHEVGFGCKVTSHPLAKDKMMNGSHYSYSESRVEKD 149
DJ-1 101 LIAAICAGPTALLAHEIGCGSKVTTPLAKDKMMNGGHYTYSENRVEKD 149

Peptide 3

SP22 150 GLILTSRGPGTSFEFALAIVEALSGKDMANQVKAPLVLD 189
DJ-1 150 GLILTSRGPGTSFEFALAIVEALNGKEVAAQVKAPLVLD 189

Peptide 4

FIGURE 2

1 A gctgtcagagccgtctggcagggttgcacccctaaaggatattccatcttattaatcattag 65
66 A tagtgtggtcagagacttagcaccattggctcccccaacctggtccagacattcagcagttta 130
131 A tcggaacagcaacaacagcaacaacaaaccccaaattacaagtcttaagaaatagaaATGgca 195
B tggcttcgcgtgggtggaggaggcgccgtcaggtcttaagaaatagaaATGgca
1 M A 2
196 tccaaaagagctctggcatcctagccaaaggagcagaggatggagacagtgattcctgtgga 260
16 S K R A L V I L A K G A E E M E T V I P V D 24
261 catcatgcggcgagctgggattaaagtaccgttgcaggcttggctggaaaggacccgtcagt 325
38 I M R R A G I K V T V A G L A G K D P V Q 45
Peptide 1
326 gtagccgtgatgttagtgatttgcggataccagtctggagaagcaaaaaacacaggaccatac 390
59 C S R D V V I C P D T S L E E A K T Q G P Y 67
391 gatgtggttgttctccaggagaaatctgggtgcacagaacttatctgagtcggcttggtaa 455
81 D V V V L P G G N L G A Q N L S E S A L V K 89
456 ggagatcctaaggagcaggagaacaggaaggccctcatagctgccatctgtgcgggtcctacgg 520
103 E I L K E Q E N R K G L I A A I C A G P T 110
Peptide 2
*
521 ccctgctggctcacgaagttaggcttggatgcaaggatcatcgccacccattggtaaggacaaa 585
124 A L L A H E V G F G C K V T S H P L A K D K 132
Peptide 3
586 atgatgaacggcagtcaactacagctactcagagagccgtgtggagaaggacggccctcatcctcac 650
146 M M N G S H Y S Y S E S R V E K D G L I L T 154
Peptide 4
651 cagccgtggcctggaccagcttcgagttgcgtggccattgtggaggcactcagtggcaagg 715
168 S R G P G T S F E F A L A I V E A L S G K 175
716 acatggctaaccaagtgaaggccccgttctcaaaagacTAGagagccaaaggccctggaccct 780
189 D M A N Q V K A P L V L K D * 189
781 ggaccccccaggctgagcaggcattggaagcccactagtgtgtccacagccactgAACCTGGCAT 845
846 tggaagcccactagtgtgtccacagcccagtgaacctcaggaactaacgtgtgaagttagccgct 910
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976 agctc*c*tgacggct* 985

Figure 3

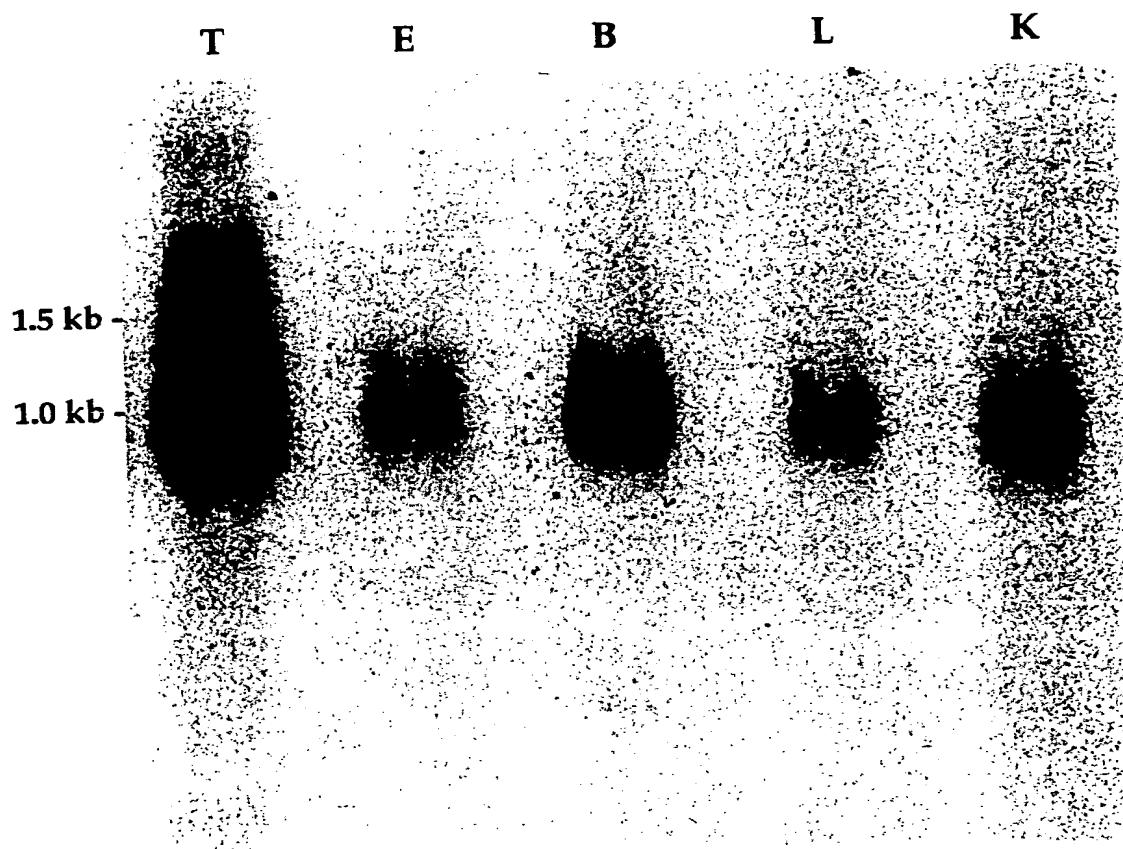


Figure 4

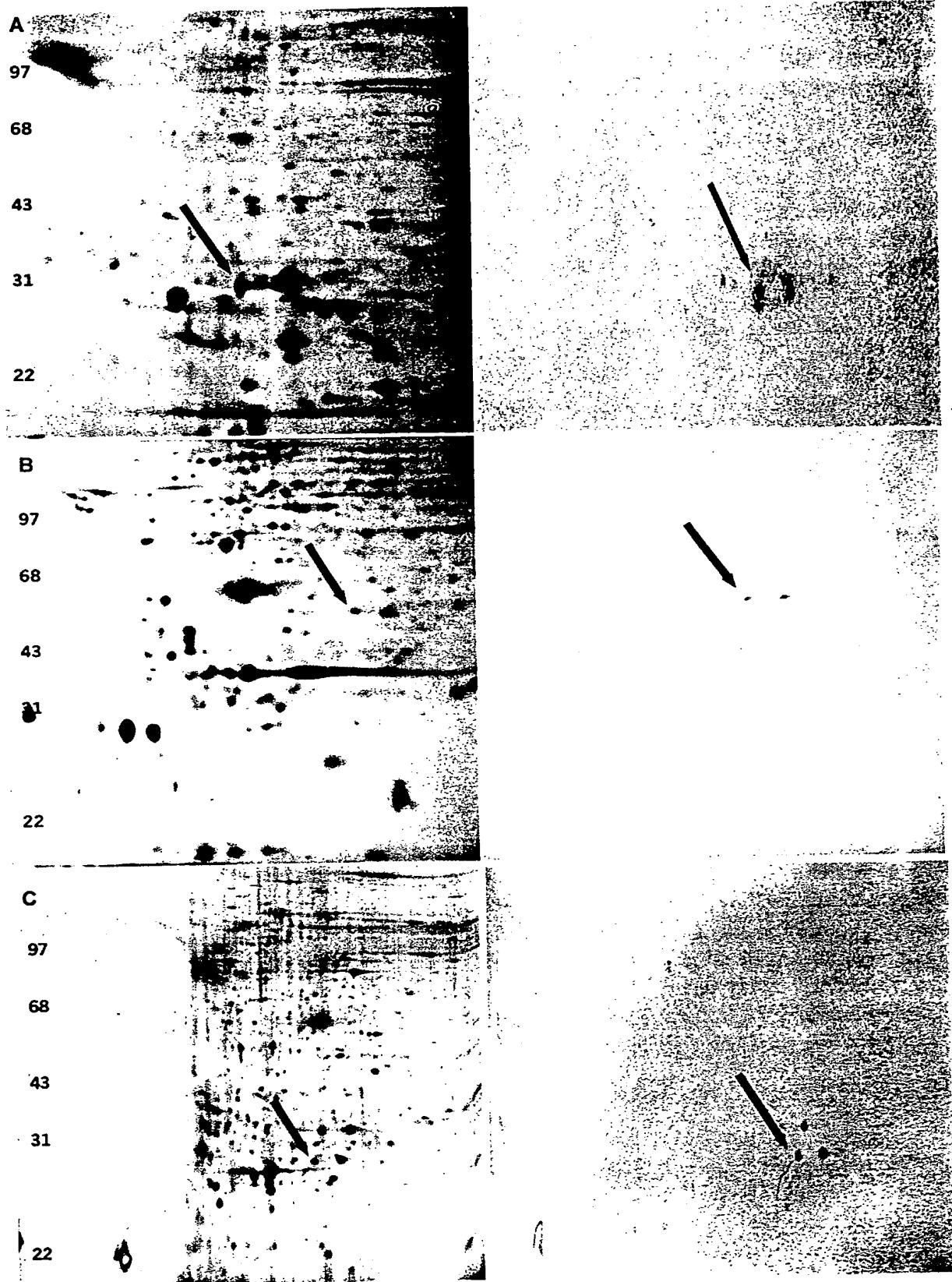
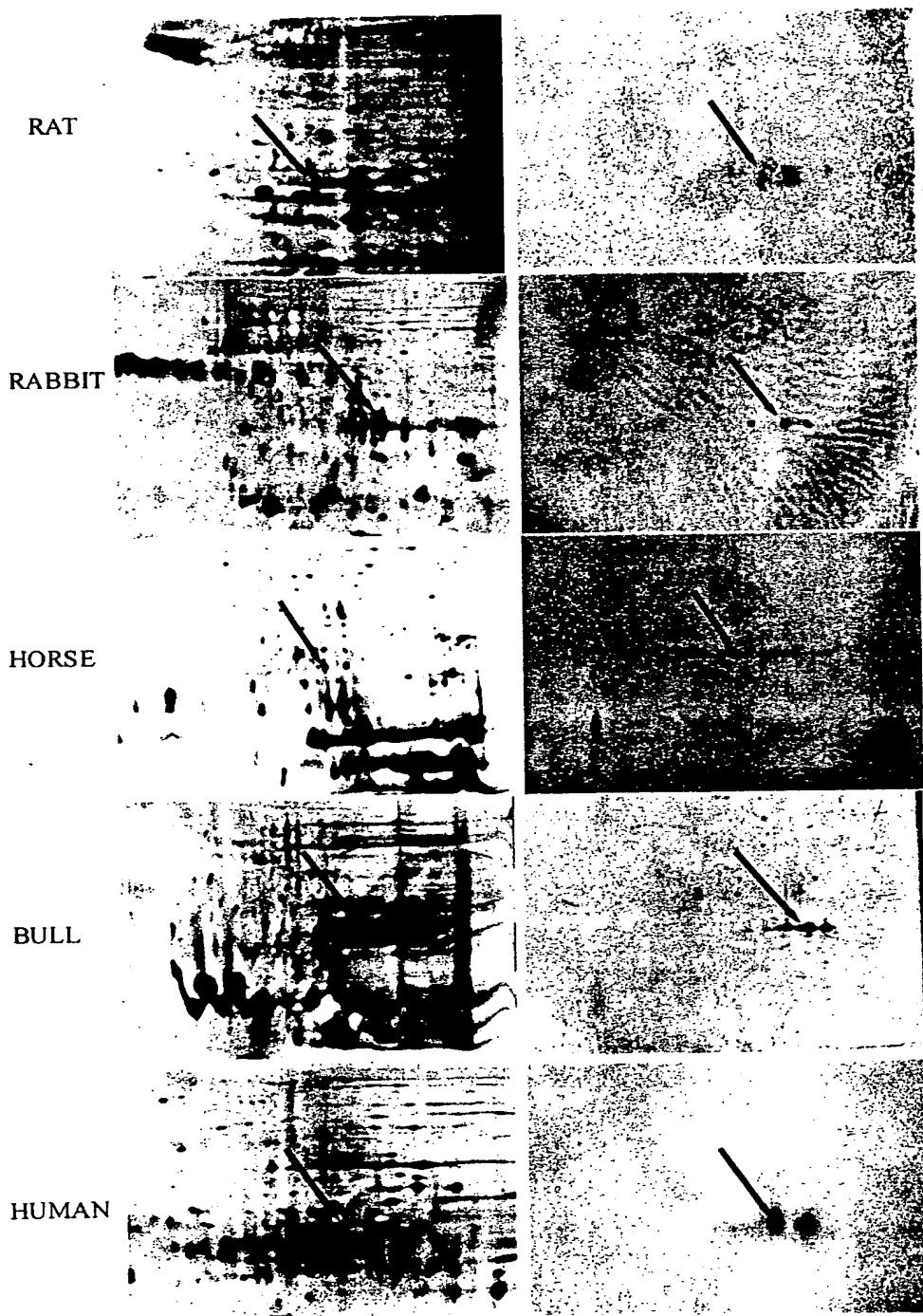


Figure 5



009752354440000000000000

Figure 6

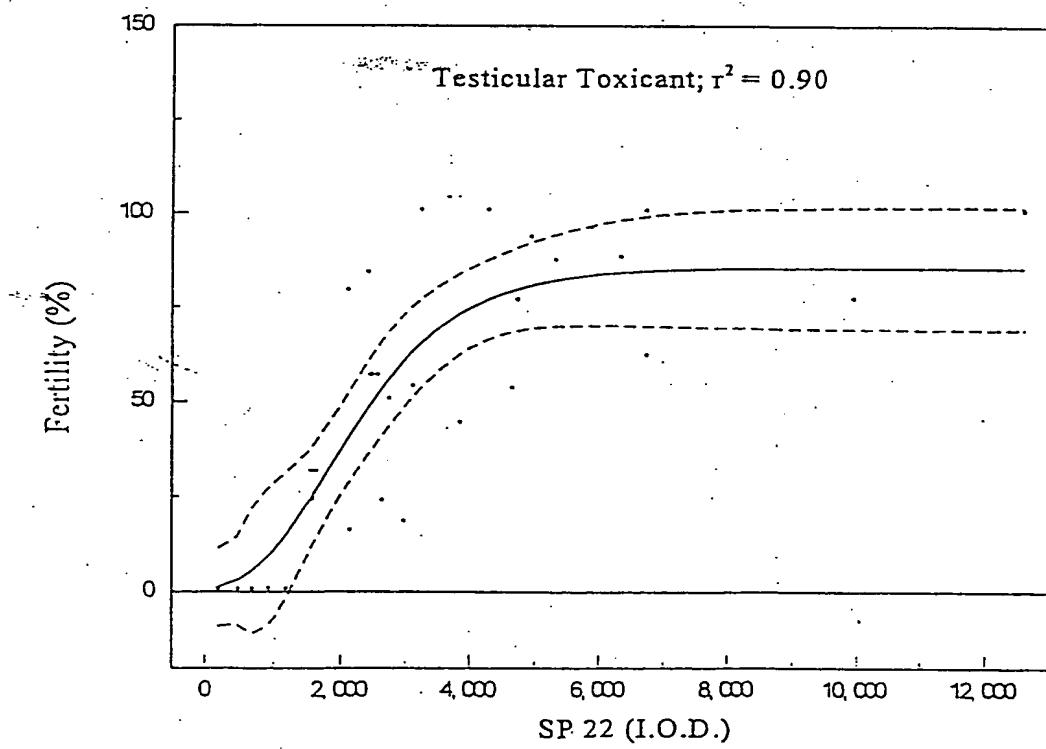
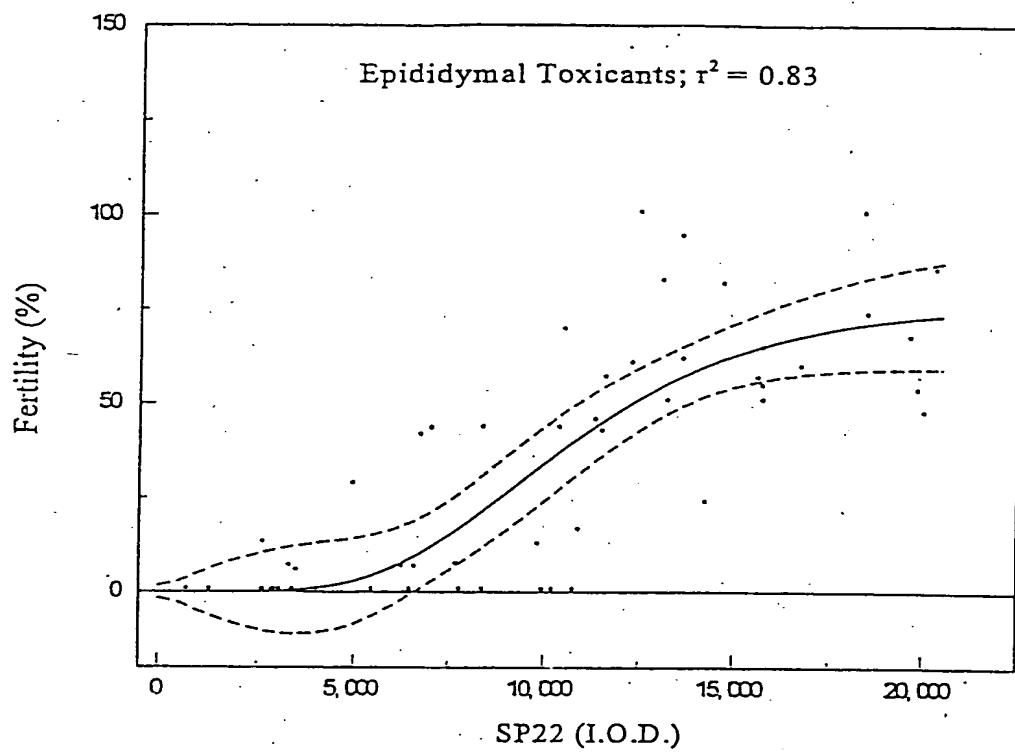


Figure 7

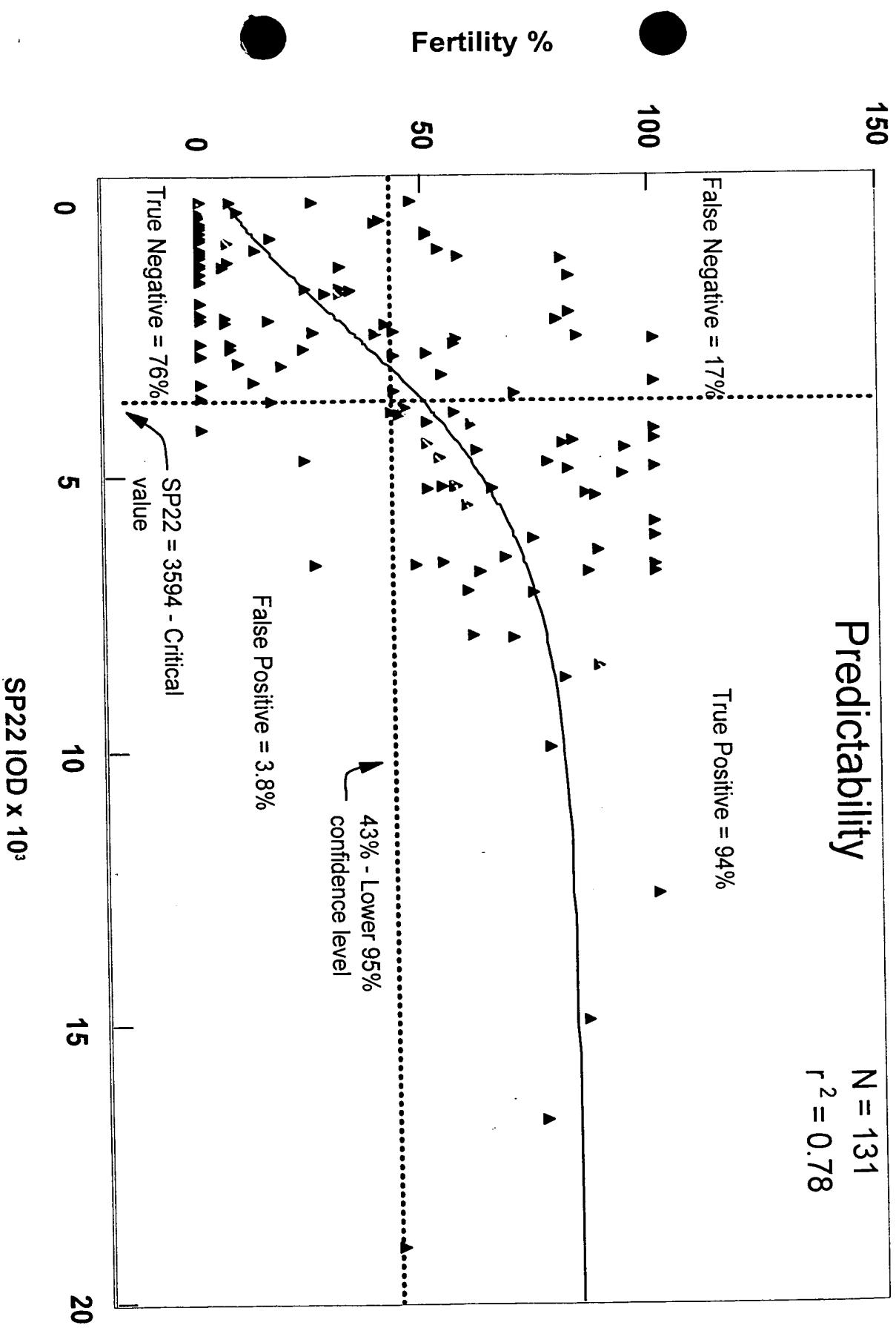


Figure 8

Sequential Sp22 15 MER Peptides

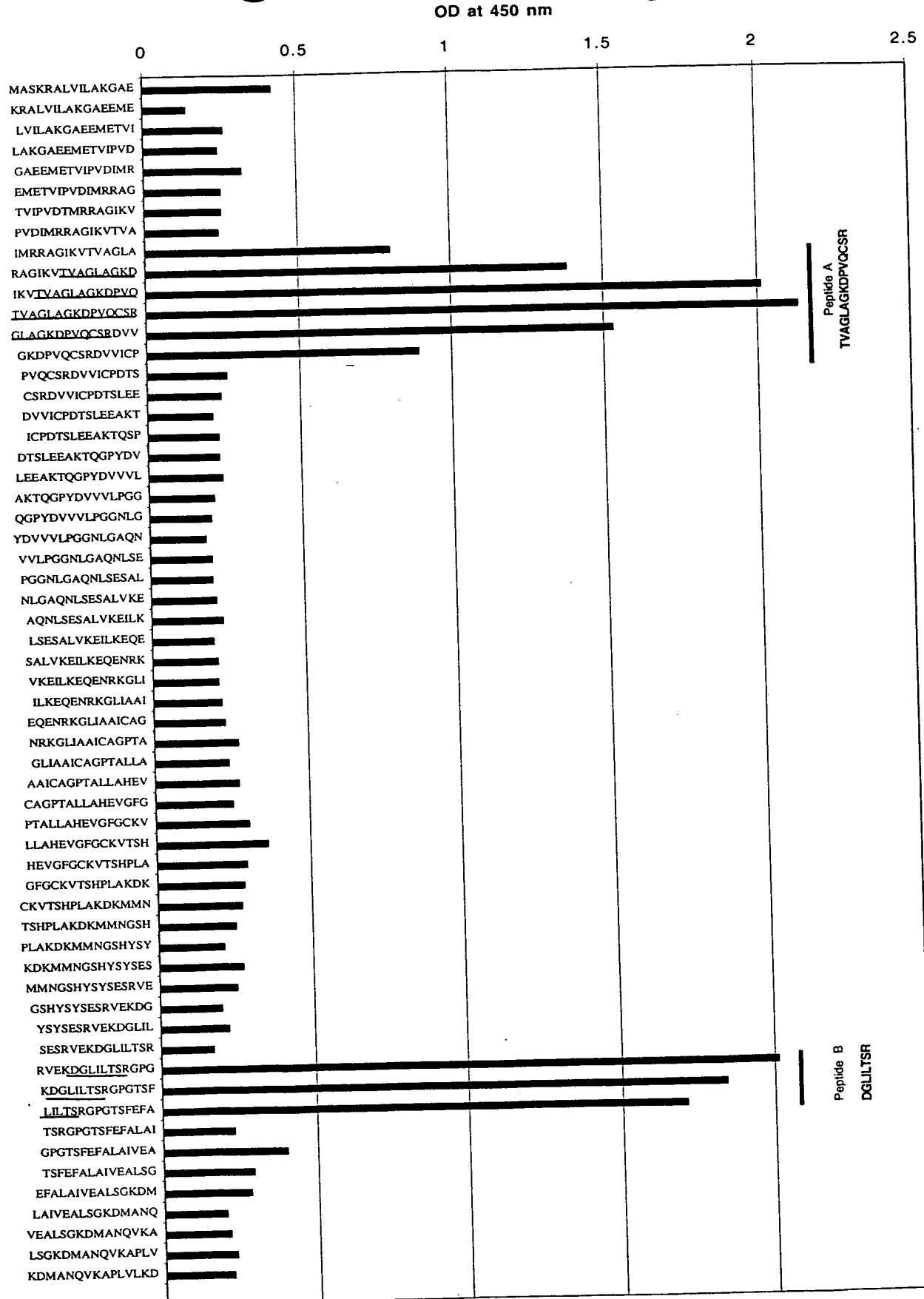


Figure 9

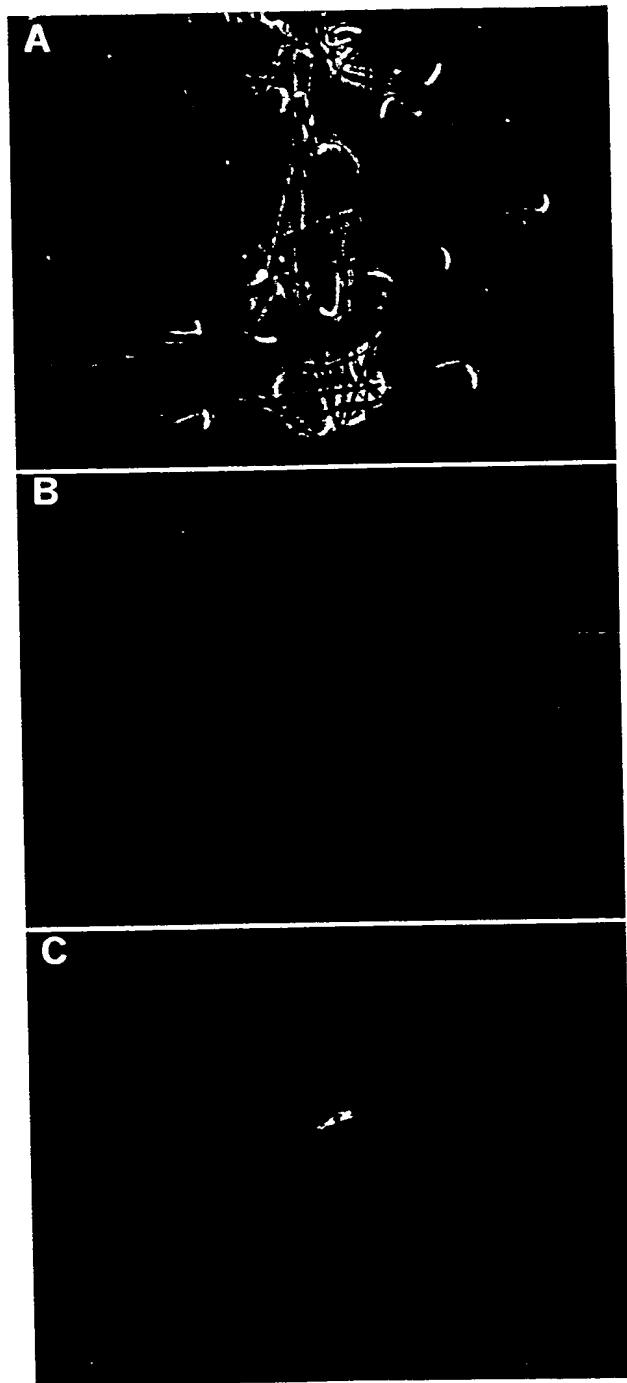
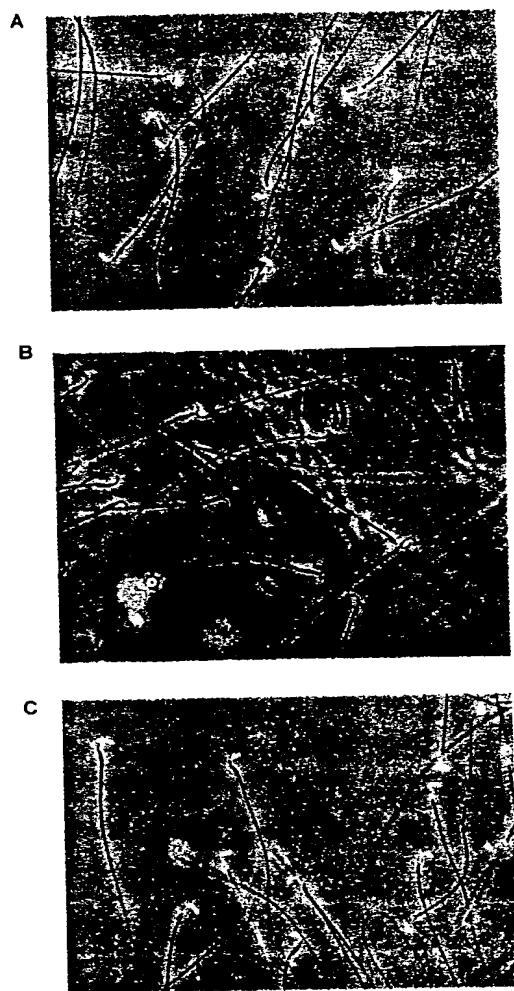


Figure 10



0 9 7 5 2 5 4 4 6 0 0 0

Figure 11

In Utero Insemination

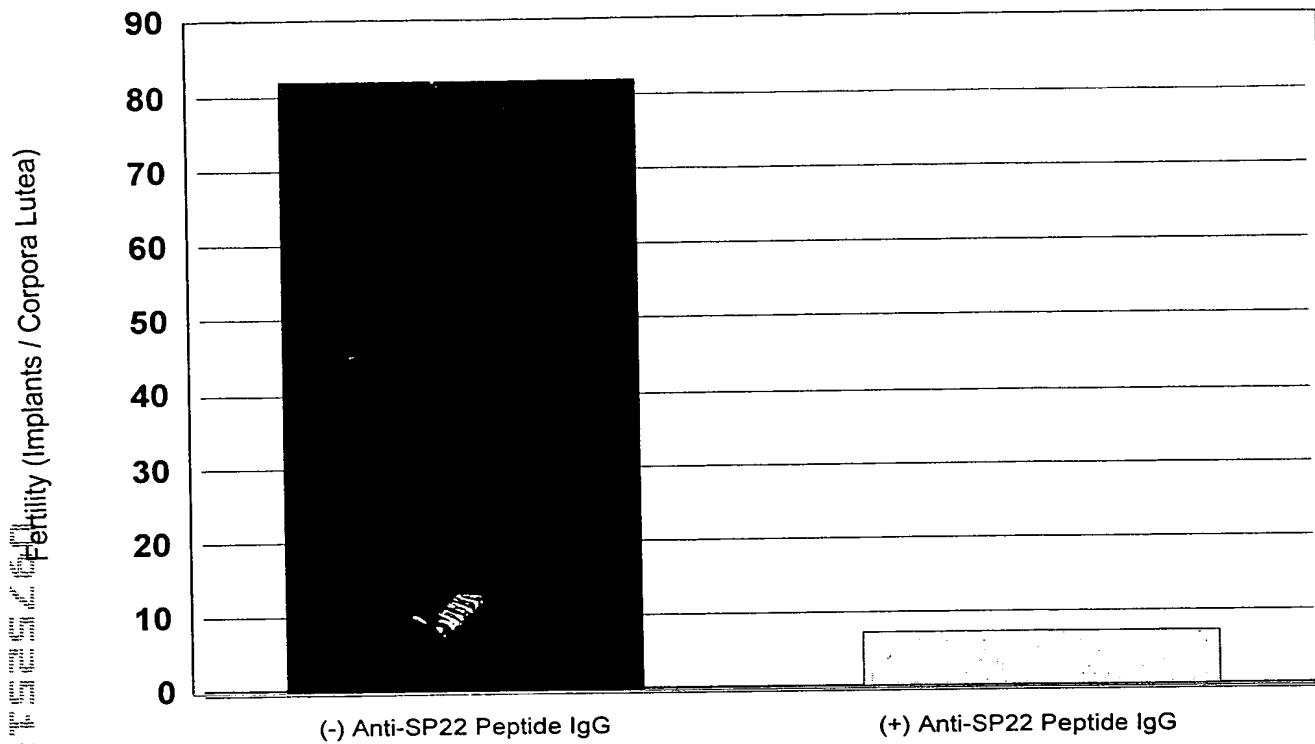


Figure 12

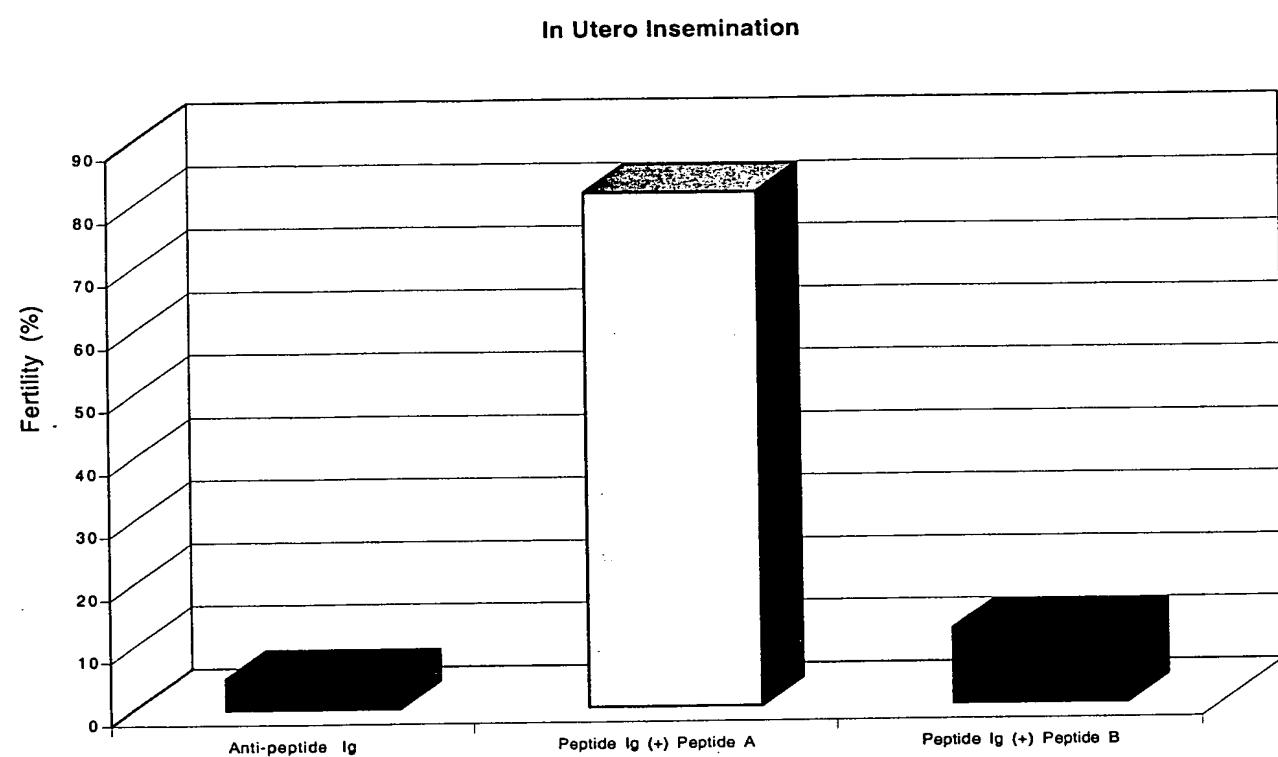


Figure 13

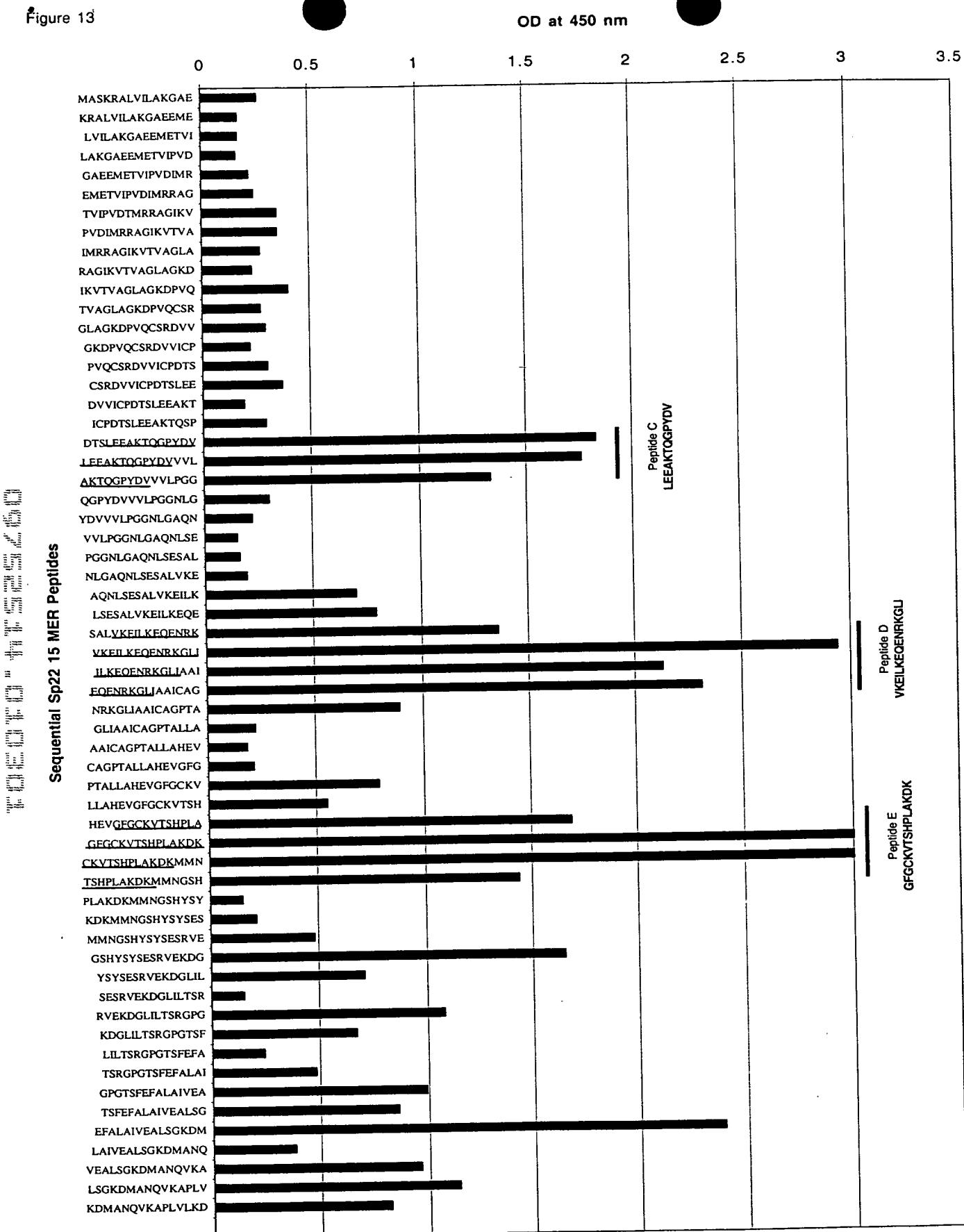
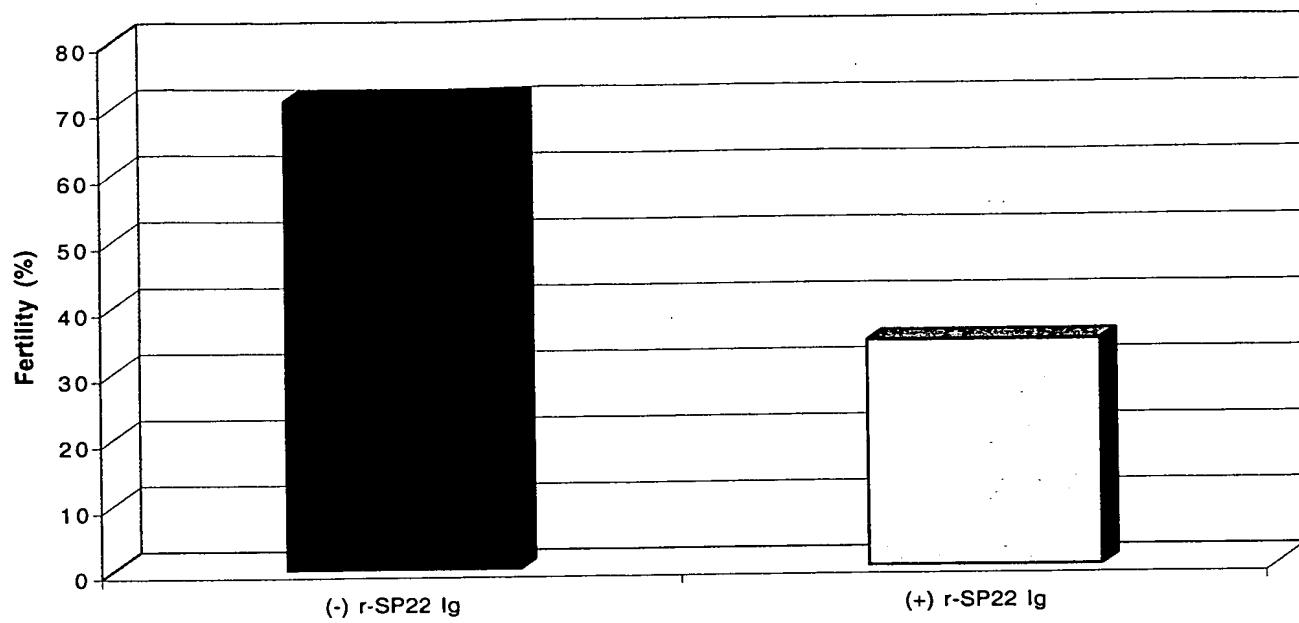


Figure 14

In Utero Insemination



In Vitro Fertilization

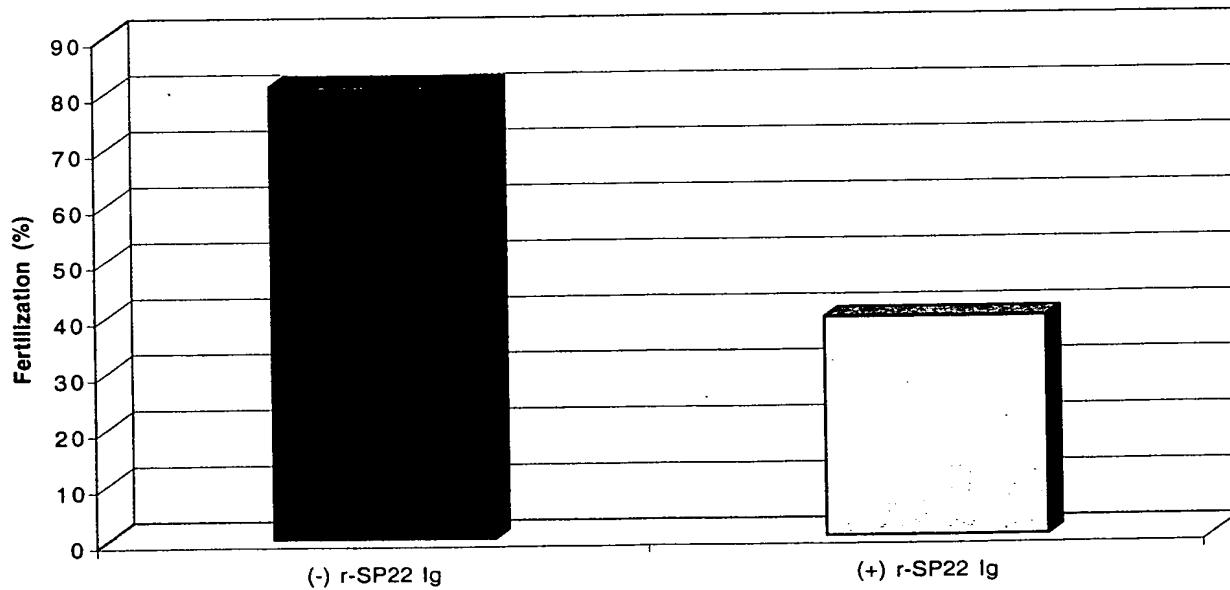


FIG. 15.

1 xxxatggcataccaaaagagctctggtcac 66
 1 x x x x x x x x x x x x x x x M A S K R A L V I 22
 1 ctagccaaaggagcagaggagatggagacagtgattcctgtggacatcatgcggcgagctgggatt 132
 67 23 L A K G A E E M E T V I P V D I M R R A G I 44
 133 aaagtcaccgttgcaggcttggtggaaaggacccgtgcagtgttagccgtatgtgattgtattgt 198
 45 233 K V T V A G L A G K D P V Q C S R D V V I C 66
 199 ccggataccagtctggaagaagcaaaaacacagggaccatacgtatgtttccaggagga 264
 67 67 P D T S L E E A K T Q G P Y D V V V L P G G 88
 265 aatctgggtgcacagaacttatctgagtcggctttggtaaggagatcctaaggagcaggagaac 330
 89 331 N L G A Q N L S E S A L V K E I L K E Q E N 110
 331 aggaagggcctcatagctgccatctgtcggttcacggccctgtggctcacgaagtaggcttt 396
 111 111 R K G L I A A I C A G P T A L L A H E V G F 132
 397 397 ggtatgcaagggttacatcgccccattggtaaggacaaaatgtgaacggcagtcactacagctac 462
 133 133 G C K V T S H P L A K D K M M N G S H Y S Y 154
 463 463 ttagatggcgatggcactcgtggagaaggacggcctcatcctaccagccgtggaccagttcgag 528
 155 155 S E S R V E K D G L I L T S R G P G T S F E 176
 528 528 tttgcgctggccattgtggaggcactcgtggcaaggacatggctaaccatggcaaggccctgtggaccagttcgag 594
 177 177 F A L A I V E A L S G K D M A N Q V K A P L 198
 595 595 gttctcaaagactagagagccaaaggccctggaccctggaccccccaggctgagcaggcattggaaagc 660
 202 199 199 V L K D *
 661 661 ccactagagagaccacagccaggtaaacctggcattggaaagccactagtggtccacagccagt 726
 727 727 gaacctcaggaactaacgtgtgaagtagccgctgctcaggaatctgcgcctggctctgtactatt 792
 830 793 793 ctgagccttgctagtagaaataaacagttccccaaagctc

FIGURE 16

SP22 (A)

1 gctgtgcagagccgtctggcagggttgcacccaaaggatattccatcttattaatcattag 65
 1 66 tagtgtggtcagagacttagcaccattggtctcccccaacctggtccagacattcagcagtta 130
 131 tcggaacagcaacaacacagcaacaaaacccaaaattacaagtcttaagaaatagaaATGgca 195
 1 196 tccaaaagagctctgtcatcctagccaaaggagcagaggagatggagacagtgatccctgtgga 260
 3 S K R A I V I L A K G A E E M E T V I P V D 24
 25 261 catgcggcgaacctggattaaagtaccgttgcaggcttggctggaaaggaccggcgtgcagt 325
 3 I M R R A G I K V T V A G L A G K D P V Q 45
 326 46 gtagccgtatgtatgtgatccggataccagtctggataagaagcaaaaacacagggaccatac 390
 46 C S R D V V I C P D T S L E E A K T Q G P Y 67
 391 68 gatgtggttgttccaggaggaaatctgggtgcacagaacttatctgagtcggcttggtgaa 455
 68 D V V V L P G G N L G A Q N L S E S A L V K 89
 456 90 ggagatcctcaaggagcaggagaacaggaaggccctcatagctgccatctgtgagggtcctacgg 520
 90 E I L K E Q E N R K G L I A A I C A G P T 110
 521 111 ccctgctggctacgaagttaggcttggatgcaaggttacatcgcacccattggctaaggacaaa 585
 111 A L L A F E V G F G C K V T S H P L A K D K 132
 586 133 atgatgaacggc:gtcactacagactcagagagccgtgtggagaaggacggccatcctcac 650
 133 M M N G S H Y S Y S E S R V E K D G L I L T 154
 651 155 cagccgtggcc:gggaccagcttcgagttgcgtggcattgtggaggcactcagtggcaagg 715
 155 S R G P G T S F E F A L A I V E A L S C K 175
 716 176 acatggctaaccc:agtgaaggcccccttgcgttctcaaagactAGagagcccaagccctggaccct 780
 176 D M A N Q V K A P L V L K D 189
 781 846 ggaccccccaggctgagcaggcattggaagcccactagtgtgtccacagccactgaaac 845
 846 tggaagcccactagtgtgtccacagccactgaaacctcaggaactaacgtgtgaagttagcccgct 910
 911 gctcaggaatctcgccctggctctgtactattctgagccttgctagtagaataaacagttccccca 975